

## SELF-PINNED IN-STACK BIAS STRUCTURE WITH IMPROVED PINNING

### ABSTRACT

A magnetic reading head having an air bearing surface (ABS) and including an antiparallel (AP) pinned layer structure and a bias layer spaced apart from the AP pinned layer structure, where a magnetic moment of the bias layer is pinned. A free layer is positioned between the AP pinned layer structure and the bias layer. The bias layer provides stabilizes the magnetic moment of the free layer.